



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------------|------------------|
| 10/679,262  | 10/07/2003  | Michael A. Horswill  | 84701 3029 Gnn                  | 3125             |
| 20736   | 7590        | 08/09/2005           |                                 |                  |
| MANELLI DENISON & SELTER<br>2000 M STREET NW SUITE 700<br>WASHINGTON, DC 20036-3307 |             |                      |                                 |                  |
|   |             |                      | EXAMINER<br>CASAREGOLA, LOUIS J |                  |
|   |             |                      | ART UNIT                        | PAPER NUMBER     |
|   |             |                      | 3746                            |                  |

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/679,262

Applicant(s)

HORSWILL ET AL.

Examiner

Louis J. Casaregola

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/24/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC 112***

Claims 1-13 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

The invention in this case is a control apparatus and the present claims recite numerous control features as means-plus-function limitations. Such limitations though permitted under the 6th paragraph of § 112 must still have a definite scope as required by the 2nd paragraph of § 112. Each claimed means must read on a specific element (or elements) in the disclosed embodiment of the invention such that the scope of the each means clearly corresponds to the disclosed element and its known equivalents. In this instance however, many of the claimed means are indefinite as to scope since it is unclear how they are intended to correspond to the structural elements actually shown in the disclosed embodiment of the invention.

The indefinite mean-plus-function limitations in claim 1 and related dependent claims 2-13 include:

“means for receiving a signal representative of the desired thrust...” (claim 1, lines 4-5),

“means for receiving a signal representative of the actual thrust...” (claim 1, lines 6-7),

“means for analysing the above signals...” (claim 1, line 8),

“means for receiving a signal representing a desired fuel flow” (claim 1, lines 12-13),  
“means for providing a signal...” (claim 1, line 14),  
“fuel monitoring means...” (claim 1, line 14)  
“means for receiving a feedback signal...” (claim 1, line 16),  
“means for analysing the signal...” (claim 1, line 18),  
“protector means...” (claim 7, line 3),  
“protector means...” (claim 8, line 2),  
“means for receiving a signal representing of engine thrust...” (claim 8, lines 2-3),  
“means for calculating a maximum desired fuel flow...” (claim 8, lines 5-6),  
“means for determining...” (claim 10, line 2),  
“means for reducing or preventing fuel flow...” (claim 10, lines 5-6),  
“fuel monitoring means...” (claim 11, line 2), and  
“fuel monitoring means...” (claim 12, line 2).

The disclosed invention is shown in Figures 3 and 4 as a series of rough schematic components many of which lack reference characters or labels, and the related discussion in the specification fails to establish any clear correspondence between the components shown and the claimed “means” listed above. The above listed “means” are therefore indefinite as to scope.

### ***Arguments***

Applicants' arguments have been considered but are not effective in overcoming the rejection.

Applicants response merely lists each of the particular "means" cited in the above rejection along with sections of the specification which allegedly describe that means. The cited portions of the specification have been reviewed but they are not, however, seen to establish a clear one-to-one correspondence between each claimed "means" and a distinct element or group of elements in the disclosed embodiment of the invention.

On page 4 of their response, applicants state for example, "page 5 lines 16-29 describe the claimed '... means for receiving a signal representative of desired/actual thrust...' (claim 1 lines 4-7)". As pointed out in the rejection, the claims in fact recite both a "means for receiving a signal representative of the desired thrust...", and a "means for receiving a signal representative of the actual thrust...". The cited section of page 5 does not, however, positively identify either of these means in terms of the structural elements actually shown. The so-called "signal representing desired thrust" is never specifically identified and could conceivably be either of signals 56 or 80 shown in Figure 4. Assuming it is signal 56 (the most likely choice), then the "means for receiving" the signal appears as a "black box", which is unnumbered and does not directly correspond to any of the structure described in the cited section of page 5. The

so-called "signal representative of the actual thrust" is likewise never specifically identified and could be either of signals 84 or 63. The "means for receiving" the signal would then be one of the further "black boxes" within control unit 52, which are similarly unnumbered and do not directly correspond to the structure described on page 5.

Applicants additionally state, "page 6 lines 7-17 describe the claimed '... means for analysing the above signals...' (claim 1 line 8)". As in the case of the signal receiving means above, however, the cited section of the specification does not positively identify the claimed "means for analysing" in terms of the structural elements actually shown. The cited material describes the general operation of controller unit 52, but that apparatus per se cannot be read on the "means for analysing". As noted above, various unidentified components of unit 52 correspond to the claimed means for receiving the actual thrust signal, and the same structure cannot reasonably be claimed twice as two distinct "means". The "means for analysing" could conceivably be another one of the "Black Box" elements within unit 52, but if so, this element is never positively identified.

The specific "means" discussed above are merely exemplary, and similar problems exist with respect to all of the other claimed "means" listed in the rejection. The various portions of the specification cited by applicants discuss the general operation of the invention but fail to positively identify a distinct structural element or element(s) that corresponds to each of the claimed "means". The claimed "means" listed in the rejection are therefore still considered indefinite as to scope.


Art Unit: 3746

***Final Rejection***

***THIS ACTION IS MADE FINAL.*** Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

L. J. Casaregola  
571-272-4826 (M-F; 7:30-4:00)  
571-273-8300 FAX  
August 8, 2005

  
LOUIS J. CASAREGOLA  
PRIMARY EXAMINER

If repeated attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor, Timothy Thorpe, can be reached at 571-272-4444.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, and status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).